MARAN, J.

"An outline of the entomogeographical conditions in Czechoslovakia."

SBORNIK FAUNISTICKYCH PRACI. ACTA FAUNISTICA ENTOMOLOGICA, Praha, Czechoslovakia, Vol. 1, 1956

Monthly List of EAST EUROPEAN ACCESSIONS INDEX (EEAI), LC, Vol. 8, No. 7, July, 1959

Unclassified

MARAN, J.

Aug. Hoffer and Jar. Staif's Obecna entomologie (General Entomology); a book review. p. 222.

OCHRANA PRIRODY. Vol. 11, no. 7, Sept. 1956

Praha, Czechoslovakia

SOURCE: East European List (EEAL) Library of Congress, Vol. 6, No. 1, January 1957

MIRAN, J.

"The zoogeographic division of Czechoslovakia."

p. 89 (Ceskoslovenska Etnografie, Vol.63, no. 2, 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 9, September 1958

MARAN, STANISLAV.

Maran Stanislav. Zemepis Ceskoslovenske republiky; ucebnice pro osmy postupny rocnik vseobecne vzdelavacich skol. (Vyd. 1.) Praha, St. pedagogicke nakl., 1954. 171 s. (Geography of the Czechoslovak Republic; a textbook for the 8th grade of schools of general education. 1st ed. illus., maps)

SO: Monthly List of the East European Accessions, (EEAL) LC. Vol. 4, no. 10, Oct. 1955. Uncl.

MARAN, STANISLAV

GEOGRAPHY & GEOLOGY

MARAN, STANISLAV. Zemepis Ceskoslovenske republiky; ucebnice pro osmy postupny rocnik vseobecne vzdelavacich skol. Praha, Stani pedagogicke nakl., 1957. 172 p.
OU
DLC has variant edition

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 5, May 1959, Unclass.

KIRILLIN, V.A.; PANTYUSHIN, V.S.; SIROTINSKIY, L.I.; BEL'KIND, L.D.; FEDOSEYEV, A.M.; UL'YANOV, S.A.; VENIKOV, V.A.; MARANCHAK, V.M.; ANISIMOVA, N.D.

Professor I.I.Solov'ev. Fiftieth anniversary of his birth. Elektrichestvo no.10:93 O '53. (MLRA 6:10)

(Solov'ev, Ivan Ivanovich, 1903-)

Maranchak, V. M.

AID P - 4095

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 6/24

Author : Maranchak, V. M., Kand. Tech. Sci., Dotsent

Title : Protection of water-wheels operating in a unit with transformers, against short-circuiting.

Periodical : Elektrichestvo, 11, 33-42, N 1955

Abstract : The author discusses the problem of protection of water-wheel generators operating in a unit with the step-up transformers where selective protection against short-circuiting becomes difficult to execute and lacks flexibility. The study of transients caused by the shorts permitted developing a selective protection which responds to currents and voltages of zero sequence. Its performance is independent of the degree of compensation of the capacity current and is highly sensitive. The author used as filters zero sequence current transformers of the TPNSh type. The same type of protection

Elektrichestvo, 11, 33-42, N 1955 AID P - 4095

Card 2/2 Pub. 27 - 6/24

may be also used for generators connected with the low-tension buses and in complex compensated cable networks. Seventeen diagrams and oscillograms, 3 Soviet references (1936, 1950, 1952).

Institution : Moscow Power Engineering Institute im. Molotov

Submitted : My 13, 1955

MARANCHAK, V.M., kand. tekhn. nauk, dotsent

Using semiconductors in protection devices for electric systems.
Trudy MEI no.30:98-104 '58. (MIRA 12:5)

1.Moskovskiy ordena Lenina energeticheskiy institut, Kafedra releynoy zashchity i avtomatizatsii energosistem.
(Electric networks) (Transistors)

L 8903-65 EWT(1)/EWT(m)/EWP(q)/EWP(b) IJP(c)/ESD(gs)/RAEM(a)/AS(mp)-2/ESD(t)/
RAEM(t)/RAEM(c) JD
ACCESSION NR: AP4046607 S/0181/64/006/010/2981/2983

AUTHOR: Kuznetsov, F. A.; Sidorov, Yu. G.; Maranchuk, I. Ye.

TITLE: Quantitative description of transport reactions

SOURCE: Fizika tverdogo tela, v. 6, no. 10, 1964, 2981-2983

TOPIC TAGS: single crystal growth, germanium single crystal, vapor grown germanium, chemical transport reaction, germanium disproportionation, germanium iodine system, vapor supersaturation

ABSTRACT: Supersaturation at the critical temperature of beginning crystallization is defined and calculated in the same manner for both the general case of crystal growth from the vapor phase and the case of germanium crystal growth by a heterogeneous-germanium disproportionation reaction. Supersaturation is considered an important factor in determining the morphology and defectiveness of a crystal. In the chemical transport reaction

$$2\,GeI_{2(g)} \longrightarrow Ge_{(s)} + GeI_{4(g)}$$

supersaturation is defined as ΔG or the ratio K_p/Π, where K_p is the

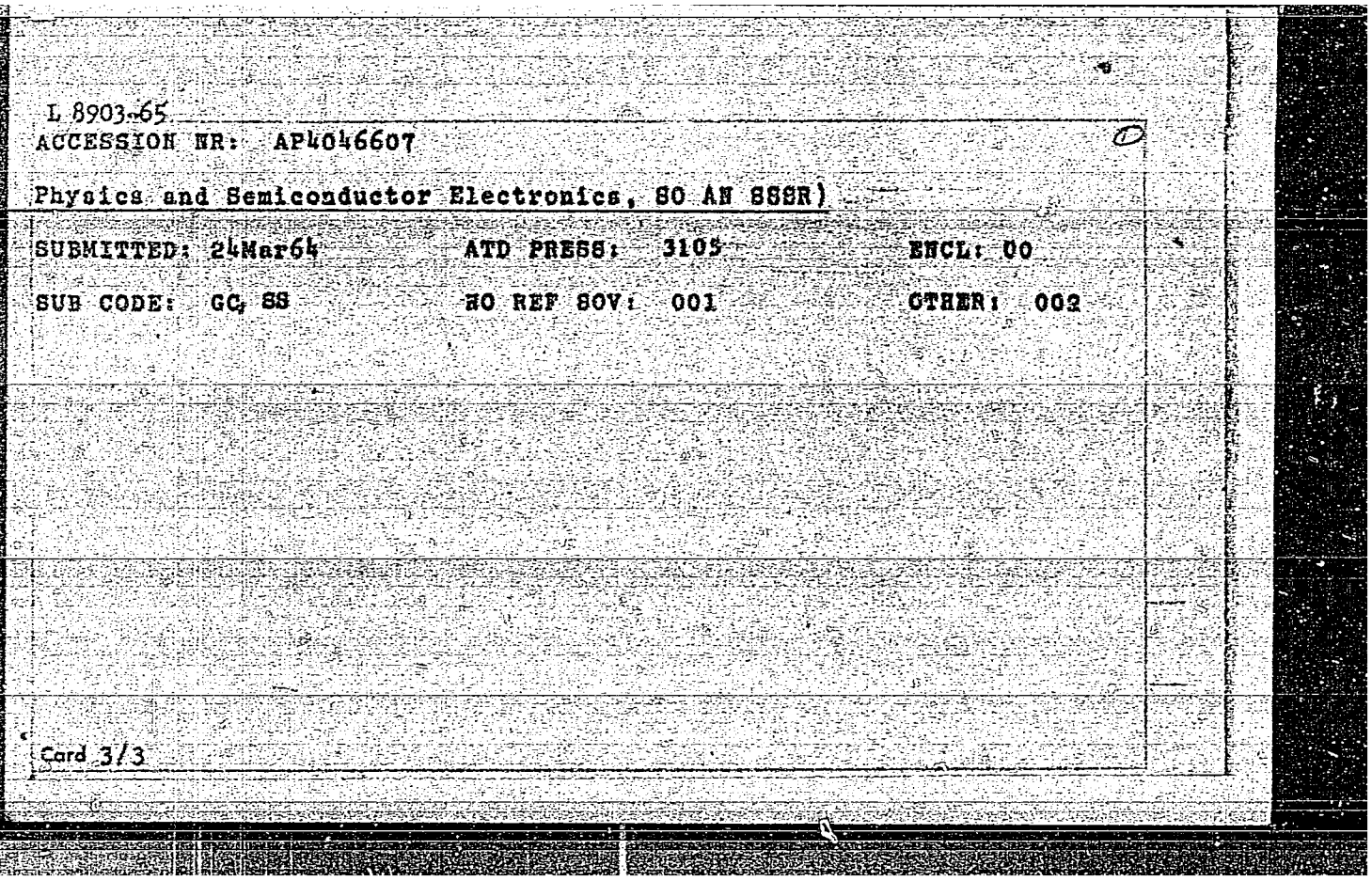
Card 1/3

equilibrium constant of the reaction, Π the ratio of partial pressures

$$P_{GeI_4} / P^2_{GeI_2},$$

and ΔG the change in isobaric-isothermic chemical potential of the process. A generalized formula is derived for calculating the amount of germanium crystallized in a given volume of a given $GeI_2 + GeI_4$ mixture, since in the case of a complex chemical reaction supersaturation cannot be directly correlated with crystallization rate and, therefore, cannot be taken as a measure of deviation from equilibrium. The previously reported discrepancies between the temperatures of crystallization and of the source site are confirmed experimentally. It is concluded that germanium crystallization occurs at a temperature substantially lower than the equilibrium temperature, since equilibrium is not reached at the source site. Orig. art. has: 1 table and 9 formulas.

ASSOCIATION: Institut neorganicheskoy khimii SO AN SSSR (Institute of Inorganic Chemistry, SO AN SSSR); Institut fiziki tverdogo tela i poluprovodnikovoy elektroniki SO AN SSSR (Institute of Solid State



L 8903-65
ACCESSION NR: AP4046607

Physics and Semiconductor Electronics, SO AN SSSR)

SUBMITTED: 24Mar64 ATD PRESS: 3105 ENCL: 00

SUB CODE: GC, SS NO REF SOV: 001 OTHER: 002

Card 3/3

RUMANIA

Ing. A. MARANDICI, Institute for Research in Animal Husbandry (Institutul de cercetari zootehnice.)

"Aspects of Poultry Breeding in the Peoples' Republic of Bulgaria."

Bucharest, Revista de Zootehnice si Medicina Veterinara, Vol 13, No 4, Apr 63; pp 109-115.

Abstract: There are 23 million head of poultry in Bulgaria; including 11 in workers' cooperative farms, 2 in state farms, rest private small flocks. Leghorns are most popular (70%). Large farms with mechanized production are encouraged. Feed and various other aspects of poultry breeding such as stock selection, slaughter, are described as seen in many Bulgarian farms.

RUMANIA

POP, Ing. M. and MARANDICI, Ing. A., Agricultural Section of I.C.Z. (Sectia de avicultura din I.C.Z.) [Acronym not identified]

"Production of Broilers from Crosses Between Cornish Cocks and Rhode Island Hens"

Bucharest, Revista de Zootehnie si Medicina Veterinara, Vol 16, No. 5, May 66; pp 35-40.

Abstract: Crossing Cornish roosters with Rhode Island hens was found advantageous and is recommended for production of broilers. 6 tables show detailed growth by day of the three breeds; feed given in each, feed efficiency and related parameters.

1/1

L 60200-65 EWI(m)/EPF(c)/EWS(m)/EWP(j)/T Pc-4/Pr-4 DS/WW/GS/JAJ/RM
ACCESSION NR: AT5019603 UR/0000/64/000/000/0041/0068

AUTHOR: Korotkov, A. A.; Marandzheva, Ye. N.; Khrenova, Z. A.

TITLE: Effect which contaminants in monomer and solvent have on kinetics of isoprene polymerization

SOURCE: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka. Polimerizatsiya izoprena kompleksnymi katalizatorami (Polymerization of isoprene by complex catalysts). Moscow, Izd-vo Khimiya, 1964, 41-68

TOPIC TAGS: isoprene, polymerization, kinetics, inhibitor

ABSTRACT: Kinetics of isoprene polymerization was studied in the presence of 34 contaminants which are commonly encountered in commercial grade hydrocarbon solvents and in commercial isoprene. These contaminants were: cyclopentadiene, dimethyl formamide, butyl mercaptan, vinyl acetylene, isopropyl acetylene, dimethyl allene, methylethyl acetylene, acetylene, diethyl sulfide, acetonitrile, diethyl amid, carbon monoxide, diethyl ether, vinylethyl ether, water, thiophene, carbon disulfide, carbon dioxide, COS, ethyl alcohol, acetone, methylethyl ketone, H_2S, O_2, HCOOH, NH_3, dimethyl amide, 2,6-dimethyl-octatriene-1,3,6, pentene dimer, piperylene, iso-

Card 1/2

L 60200-65
ACCESSION NR: AT5019603

butylene, trimethyl ethylene, methylethyl ethylene, and isopropyl ethylene. All experiments were conducted at 20°C in isopentane and petroleum ether solvents. The isoprene concentration was ~1.5 mol/l; the catalyst concentration was 0.008 mol/l; and the molar ratio of $Al(iso\text{-}C_4H_9)_3$:$TiCl_3$ = 1:1. Among the contaminants examined, the cyclopentane, dimethyl formamide butyl mercaptan, and acetylene derivatives were found to be polymerization inhibitors. Mechanistically, two extreme cases were considered: 1. contaminant reacts primarily with the catalyst active centers and does not interact with the active polymer growth chains, and 2. contaminant reacts with the active polymer growth chains and practically does not interact with the catalyst active centers. Orig. art. has: 3 tables, 14 figures, 2 formulas.

ASSOCIATION: none

SUBMITTED: 24Oct64 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 006 OTHER: 004

Card 2/3

S/076/63/037/002/001/018
B101/B186

AUTHORS: Korotkov, A. A., Marandzheva, Ye. N. (Moscow)

TITLE: Thermochemical study of the catalytic polymerization of isoprene. I. Thermal effect of the polymerization reaction of isoprene with butyl lithium

PERIODICAL: Zhurnal fizicheskoy khimii, v. 37, no. 2, 1963, 257-264

TEXT: To clear up inconsistencies in published data on the thermal effect of isoprene polymerization, this effect was determined directly by calorimetry using an apparatus similar to that of L. Tong, W. Kenyon (J. Amer. Chem. Soc., 67, 1278, 1945; ibid., 69, 1402, 1947). The 50% solution of isoprene in gasoline fraction (b.p. 50-60°C) was polymerized at 35 or 61.3°C with 0.013-0.110 mole/l butyl lithium. In the polymerization at 35°C, ether was used as calorimeter liquid. Results: The thermal effect of the polymerization of isoprene dissolved in gasoline with butyl lithium is 15.7 ± 0.4 kcal/mole. In two tests the molecular weights of the polymer were 31,500 and 39,300 and the yields 53 and 63%. The degree of unsaturation was 102%, the content of 1,2 and 3,4 links was 7%. The incomplete polymerization is explained by termination caused by impurities

S/076/63/037/002/001/018
B101/B186

Thermochemical study of the ....

reacting with butyl lithium. The experimental value of the thermal effect is lower than that calculated by A. Ewans, E. Tyrall (J. Polymer Sci., 2, 387, 1947) and D. Roberts (J. Res.-Nat. Bur. Standards, 44, 222, 1950). This difference cannot be explained by the content of 1,2 and 3,4 links. It is attributed to a stress in the polymer molecule caused by the interaction of methyl and methylene groups which had not been considered in the calculation. The degree of unsaturation indicates that cyclization and intermolecular cross-linking are not important factors in the polymerization of isoprene at 35°C. There are 5 figures and 2 tables.

ASSOCIATION: Leningradskiy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka (Leningrad Scientific Research Institute of Synthetic Rubber)

SUBMITTED: February 19, 1958

Card 2/2

KOROTKOV, A.A.; MARANDZHEVA, Ye.N.

Thermochemical study of the catalytic polymerization of isoprene. Part 1: Heat effect of the polymerization of isoprene by butyllithium. Zhur.fiz.khim. 37 no.2:257-264 F '63. (MIRA 16:5)

1. Leningradskiy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka.

(Isoprene) (Heat of polymerization) (Lithium)

30875

S/190/62/004/006/001/026
B101/B110

5.3820
15.9220

AUTHORS: Berctkov, A. A., Murandzheva, Ya. N.

TITLE: Thermochemical study of the catalytic polymerization of isoprene. II. Effect of temperature on the overall heat effect of the polymerization of isoprene with butyl lithium

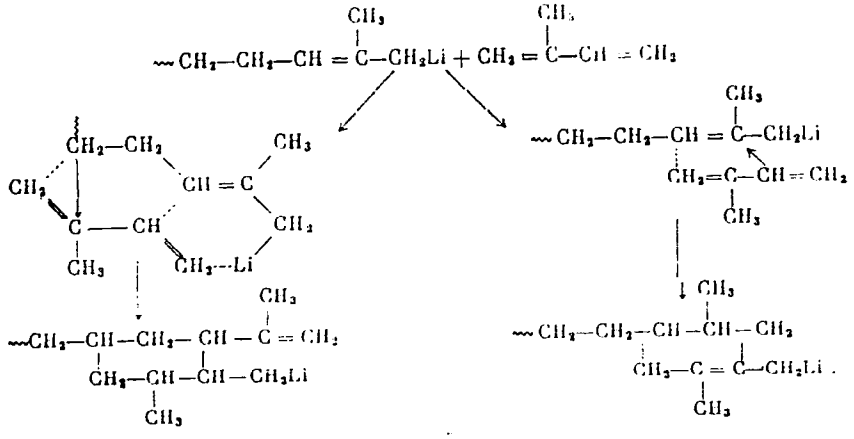
PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 6, 1962, 793-802

TEXT: The polymerization of isoprene dissolved in benzene with butyl lithium was studied with a view to a qualitative appreciation of the side reactions. The overall heat effect, Q_s, of the polymerization was measured calorimetrically at 35°C with diethyl ether as calorimeter liquid, at 42°C with methylal, at 51°C with acetone + hexane, at 61.3°C with chloroform, at 80.2°C with benzene, and at 87.7°C with propanol + water. According to Kirchhoff's rule, an increase of the polymerization temperature by 50°C should raise the heat effect by 350-400 cal/mole only; but here an increase of more than 3000 cal/mole was observed: 15.7 kcal/mole at 42°C, 19 kcal/mole at 87.7°C. A discussion of this

Card 1/3

Thermochemical study of the ...

effect reveals ... cannot be caused by cross linking, since ΔQ is inde... ndent bo... the concentration of monomer and catalyst and of the degree of polymerization. An intramolecular ring formation is therefore ass...d:



Card 2/3

Thermochemical study of the ...

This reaction also corresponds to the observed decrease of insaturation from ~100% at 35°C to ~88% at 87.7°C. $\Delta Q = Q_2 k_5 / k_2$ (Q_2 = heat effect of ring formation, k_5 = reaction constant of ring formation, k_2 = reaction constant of polymerization). If the constants of the Arrhenius equation are substituted for k_2 and k_5, a linear function $\log \Delta Q = f(1/T)$ is obtained in agreement with the experiment. The activation energy of the ring formation is 34 ± 4 kcal/mole, the factor A of the Arrhenius equation being $2.3 \cdot 10^{22} \pm 10^3$. This ring formation does not occur in free radical polymerization of bis-ethylene hydrocarbons. There are 5 figures and 1 table.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka (All-Union Scientific Research Institute of Synthetic Rubber)

SUBMITTED: July 5, 1960

Card 3/3

L 11822-65 EWT(1)/EEC(b)-2/EWA(h) Pg-4/P1-4/Pm-4/Po-4/Pq-4/Peb

ACCESSION NR: AT5009030 UR/3012/64/000/002/0067/0072

AUTHOR: Areshyan, G.L. ; Marandzhyan, G.B.

TITLE: The probability and entropy reliability criteria

SOURCE: Yerevan. Yuchislitel'nyy tsentr. Trudy, no. 2, 1964, Matematicheskiye voprosy kibernetiki i vychislitel'noy tekhniki; lineynoye programmirovaniya i teoriya avtomatov (Mathematical problems of cybernetics and computer engineering; linear programming and the theory of automatic control devices), 67-72

TOPIC TAGS: discrete memoryless automaton, probabilistic automaton, deterministic automaton, probabilistic reliability criterion, entropy reliability criterion

ABSTRACT: The authors define a memoryless probabilistic discrete automaton as a device which is used for the processing of discrete information and has only a single steady state; each input symbol determines the probability at the output alphabet. Such an automaton is fully specified by its reaction matrix. Memoryless elements, setups, and complicated devices of discrete technology can then, under specified conditions of unreliable operation, be viewed as memoryless probabilistic automata. Using specific examples they show how to transform the probabilistic automaton into a deterministic one

Card 1/2

L 41822-65

ACCESSION NR: AT5009030

2

(degeneration of the probabilistic automation), and develop probabilistic and entropy reliability criteria. "The authors thank Docent G.A. Ambartsumyan for his help and advice." Orig. art. has: 16 formulas.

ASSOCIATION: Vychislitel'nyy tsentr Yerevan, (Computer Center)

SUBMITTED: 16Jan64 ENCL: 00 SUB CODE: DP

NO REF SOV: 001 OTHER: 001

Card 2/2

L 11033-66 EWT(d)/EWT(l)/T/EWA(h) IJP(c) TG

ACC NR: AR6000416 SOURCE CODE: UR/0271/65/000/009/B005/B005

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 9B38

AUTHOR: Areshyan, G. L.; Marandzhyan, G. B.

TITLE: Probabilistic and entropy criteria of reliability

CITED SOURCE: Tr. Vychisl. tsentra AN ArmSSR i Yerevansk. un-ta, vyp. 2, 1964, 67-72

TOPIC TAGS: automaton, reliability criterion, automaton reliability

TRANSLATION: Definitions of failure (irreversible structural change) and malfunction (reversible change) are suggested for a deterministic nonstorage automaton. It is shown that the deterministic automaton operating with malfunctions can be reduced to a probabilistic automaton. A method is suggested for experimental determination of the values of a_{ij} -elements of the probability matrix of automaton y_i $(i = 1,2,\ldots,m)$ response to an alphabet of input signals x_j $(j = 1,2,\ldots,n)$, i.e., a_{ij} are the conditional probabilities $p(y_i/x_j)$. This function is offered as a probabilistic criterion of reliability:

$$\Psi = \sum_{i=1}^{n} p_i a_{ij}^*,$$

where p_i $((i = 1,2,\ldots,n)$ is the distribution of probabilities over the input alphabet of the probabilistic automaton; a_{ij}^* are those elements of the matrix

Card 1/2 UDC: 621.142.019.3.001

L 11033-66

ACC NR: AR6000418

of probabilities of malfunction-automaton response which occupy the positions of ones in the deterministic no-malfunction automaton (naturally, for this automaton, all a_{ij} can take on only 1 or 0 values).

SUB CODE: 13, 09

Card 2/2

L 41823-65 EWT(1)/EEC(b)-2/EWA(h) Pg-4/Pl-4/Pm-4/Po-4/Pq-4/Peb

ACCESSION NR: AT5009021 UR/3012/64/000/002/0073/0081

AUTHOR: Areshyan, G.L.; Marandzhyan, G.B. 33 21 13+1

TITLE: Some problems in the probability theory of automata

SOURCE: Yerevan. Vychislitel'nyy tsentr. Trudy, no. 2, 1964. Matematicheskiy voprosy kibernetiki i vychislitel'noy tekhniki; lineynoye programmirovaniye i teoriya avtomatov (Mathematical problems of cybernetics and computer engineering; linear programming and the theory of automatic control devices), 73-81

TOPIC TAGS: probabilistic discrete automaton, automaton reliability 25

ABSTRACT: The probabilistic memoryless discrete automata and their correct incorporation within a complex system have been investigated. Such a complex system is described fully by its equivalent probabilistic automaton having a reaction matrix completely determined by the reaction matrix of the original automaton. The results of this paper may be used for the analysis of the probability automata proper and also during studies of the reliability of real devices of discrete technology which are unreliable because of a special category of errors. These are caused during the cycle by reversible changes in physical parameters and random factors, which causes need not generate errors in subsequent cycles (see G.L. Areshyan, G.B. Marandzhyan, Vychislitel'nyy tsentr,

Card 1/2

L 41823-65

ACCESSION NR: AT5009031

Trudy, no. 2, 1964, pp 67-72). In addition, the same results may form the foundation for the calculation of load intensity in real elements of discrete technology incorporated within extended systems. "The authors thank Docent G.A. Ambartsumyan for valuable advice." Orig. art. has: 21 formulas and 6 figures.

ASSOCIATION: Vychislitel'nyy tsentr Yerevan, (Computer Center)

SUBMITTED: 16Jan64 ENCL: 00 SUB CODE: DP, IE

NO REF SOV: 004 OTHER: 000

Card 2/2

MARANGOZOV.

Television standards." Vol. 3, No. 5/6, 1954, p. 55. Radio, Sofiya.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, L.C.

MARANGOZOV, IV.

Magnetic Tuning of Receivers. RADIO (Radio) #9:13:Sep54

MARANGOZOV, IV

Receiving the Program of the TV Center on the "KL. VOROSHILOV" Plant. Radio Engineering, #3:23:Mar.55

MARANGOZOV, I.

Marangozov, I. Reception of television programs from the television station at the Machine-Electrotechinical Institute in the Voroshilov Plant. p. 23. Dalibor radio receiver. Tr. from the Czech. p. 26. RADIO. Sofiya. Vol. 4, no. 3, 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 11, Nov. 1955, Uncl.

MARANGOZOV, I.

New 1956 models of radios. p. 19.

RADIO Vol. 4, no. 12, 1955

Sofiya, Bulgaria

so. EAST EUROPEAN ACCESSIONS LIST Vol. 5, no. 7 July 1956

MARANGOZOV, I.

Modern European radio receivers. p. 27.
Tesla 510 A radio receiver. Tr. from the Czech. p. 35.

RADIO. Vol. 5, no. 1, 1956

Sofiia, Bulgaria

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 6, No. 1, January 1957

MARANGOZOV, I.

MARANGOZOV, I. Grundig 80U radio receiver. p. 22.
Microphone volume control and regulator. Tr. from the French. p. 25.
The kind of intermediate frequency to select for the receiver. p. 26.

Vol. 5, No. 3, 1956.
RADIO
TECHNOLOGY
Sofiia, Bulgaria

So: East European Accession, Vol. 6, No. 2, Feb. 1957

MARANAGOZOV, Iv., inzh.

Electric vibrations. Nauka i tekh mladezh no.1:18 Ja '57.

MARANGOZOV, Iv., inzh.

Radio transmission and radio waves. Nauka i tekhn mladezh no.2:18-19 F '57.

MARANGOZOV, Iv., inzh.

Antenna and crystal receiver. Nauka i tekh mladezh no.3:21-22 Mr '57.

MARANGOZOV, Iv.

Electron tubes. Nauka i tekh mladezh no.4:24-26 F '57.

MARANGOZOV, Iv., inzh.

Single-tube amplifier on crystal receiver. Nauka i tekh mladezh no.5:28-29 My '57.

MARANGOZOV, Ivan, inzh.

Moduli of a digital universal regulating system. Tekhnika Bulg 12 no.7:4-8 '63.

MARANGOZOV, L.

BULGARIA/General Problems of Pathology - Tumors. T-5

Abs Jour : Ref Zhur - Biol., No 4, 1958, 17437

Author : Petrov, N., Metev, M., Marangozov, L.
Inst : -
Title : The Clinical Picture and Course of Acute Leukemias of Childhood.

Orig Pub : Voyen. med. delo (Bulg), 1957, 12, No 2, 29-36

Abstract : No abstract.

Card 1/1

NIKOLOV, Blagoi, inzh.; VICHEV, Stefan, inzh.; MARANGOZOV, Leonid, inzh.; KAMENOV, Todor; TODOROV, Naicho

Analysis of the technical and economic indexes attained for large-paneled residential buildings in Bulgaria. Stroitelstvo 11 no.5:16-20 S-O '64.

TRAIKOV, T.P.; CUNCHEV, L. A.; MARANGOZ V, S. A.

Synthesis by modeling the qualitative system of automatic control satisfying the principle of invariance. Godishnik masn elektr 13 no.2: 9-22 '63. [publ. '64]

TROYKOV, T.P. (Bolgariya); GUNCHEV, L.A. (Bolgariya); MARANGOZOV, S.V. (Bolgariya)

Synthesis of a high-quality automatic control system using a model with satisfaction of the invariance principle. Avtomatyka 10 no.1:35-41 '65. (MIRA 18:6)

MARANOVICH T P.

28708

13.2950
6.4600 (incl. 3902)

S/021/61/000/008/003/011
D210/D303

AUTHOR: Mar'anovych, T.P.

TITLE: Reliability of a system with mixed reserve

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no.8, 1961, 994-997

TEXT: In this paper a problem of the theory of reliability, proposed by B. V. Gnedenko, member, AS UkrSSR, is solved. 1) A system consists of n devices of the same type. Every device can become out of order at random instants, not depending on other devices. The probability of disorder during the interval $(t, t + \Delta t)$ is equal to $\lambda_1 \Delta t + o(\Delta t)$ and is independent of the instant t. The devices which become out of order are repaired at once. The time of repairing is a chance value ξ with the same distribution for all devices, the distribution function being $F(x)$ and the mathematical expectation $\mu < \infty$. If any device is disturbed, the system is immediately completed from the so-called "hot" reserve consisting of m devices. The devices of

Card 1/8

Reliability of a system ...

this reserve may, in turn, become out of order at arbitrary instants with the probability $\lambda_2 \Delta t + o(\Delta t)$. The time of restoring the reserve devices is a chance value with the distribution function $F(x)$. The "hot" reserve is completed from the "cold" reserve consisting of r devices. The devices of the "cold" reserve do not get out of order. It will be considered that the system is out of order when the number of devices which are being repaired is larger than N. p_k denotes the probability of the number of devices in the state of repair - if the working regime of the system is stationary - being equal to k. Then the reliability of the system will be $\sum_{k=0}^{N} p_k$. In what follows the probabilities p_k are determined with the aid of the theory of mass servicing.[2] 2) System of equations. Let $p_k(x_1 \ldots x_k; t)$ be the probability that at the instant t the number of devices being repaired is k and that these devices were already being repaired

Card 2/8

Reliability of a system ...

prior to t during the intervals $x_1 \ldots x_k$ respectively. To determine $p_k(x_1 \ldots x_k;\ t+\Delta t)$, the corresponding event can take place in two manners excluding each other: 1) At t, there were k devices being repaired during intervals $x_1 - t, \ldots x_k - \Delta t$; during Δt, none of them was restored and none of the devices of the system or the "hot" reserve becomes out of order; 2) At t there were k+1 devices being repaired during intervals $x_1 - \Delta t, \ldots x_k - \Delta t$; during Δt none of the working devices or those of the "hot"reserve becomes out of order and the device that was being repaired during $x_{k+1} - \Delta t$ has been restored. All other possibilities have the probability of the order $o(\Delta t)$. The first of the above events has the probability

$$p_k(x_1-\Delta t,\ldots,x_k-\Delta t;t)\prod_{s=1}^{k}\frac{1-F(x_s)}{1-F(x_s-\Delta t)}(1-\varphi\Delta t)+o(\Delta t) \qquad (1)$$

Card 3/8

Reliability of a system ...

where

$$\varphi = \begin{cases} n\lambda_1 + m\lambda_2 \text{ if } k < r \\ n\lambda_1 + (m+r-k)\lambda_2 \text{ if } r \leq k < m + r \\ (m + n + r - k)\lambda_1 \text{ if } m + r \leq k < m + n + r \\ 0 \text{ if } k = m + n + r \end{cases}$$

The probability of the second event is also given. The following notation is then introduced:

$$\tilde{\psi} = \begin{cases} \psi \text{ if } 0 \leq k < m + n + r \\ 0 \text{ if } k = m + n + r \end{cases}$$

and

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Reliability of a system ...

$$p_k(x_1,\ldots,x_k;t+\Delta t) = p_k(x_1-\Delta t,\ldots,x_k-\Delta t;t)\times$$

$$\times \prod_{s=1}^{k} \frac{1-F(x_s)}{1-F(x_s-\Delta t)} (1-\varphi\Delta t) + \tilde{\psi} + o(\Delta t) \qquad (3)$$

$$\ldots p_k^* = \frac{p_k(x_1,\ldots,x_k;t)}{\prod_{s=1}^{k}[1-F(x_s)]} \qquad (4)$$

are derived: Supposing the existence of corresponding derivatives one obtains from Eq. (3) the system of integro-differential equations

Card 5/8

Reliability of a system ...

$$\frac{\partial p_k^*}{\partial t} + \frac{\partial p_k^*}{\partial x_1} + \ldots + \frac{\partial p_k^*}{\partial x_k} = -\varphi p_k^* + \tilde{\psi}\,;\, 0 \leq k < m + n + r \qquad (5)$$

Then the boundary conditions

$$p_{k+1}^*(x_1, \ldots, x_k, 0; t) = \frac{\varphi}{k+1} p_k^+ (x_1, \ldots, x_k; t)\,;\, 0 \leq k < m + n + r \qquad (6)$$

are obtained. 3) Stationary solution. If the working regime of the system is stationary the derivatives with respect to t are equal to 0 and the system of Eqs. (5) with the boundary conditions (6) has the solution

Card 6/8

Reliability of a system ...

$$p_k^* = \frac{(n\lambda_1 + m\lambda_{11})^k}{k!} p_0; \; k < r+1.$$

$$p_k^* = \frac{(n\lambda_1 + m\lambda_2)^{r+1}}{k!} \prod_{s=1}^{k-r-1} [n\lambda_1 + (m-s)\lambda_2] p_0; \; r+1 < k \leq m+r+1.$$

$$p_k^* = \frac{\lambda^{k-m-r-1}(n+1)!(n\lambda_1 + m\lambda_2)^{r+1}}{k!(m+n+r-k)!} \prod_{s=1}^{m} [n\lambda_1 + (m-s)\lambda_2] p_0;$$

$$m+r+1 < k < m+n+r.$$

Taking Eq. (4) into account and integrating with respect to all variables from 0 to oo

Card 7/8

Reliability of a system ...

$$p_k = \frac{(n\lambda_1 + m\lambda_2)^k \mu^k}{k!} p_o; \quad k \leqslant r + 1 \qquad (7)$$

is obtained. The constant p_o is determined from the normalizing condition $\sum_{k=o}^{m+n+r} p_k = 1$. The author expresses his gratitude to B. V. Gnyedenko, Academician AS UkrSSR, for formulating the problem and his valuable comments. There are 2 Soviet-bloc references.

ASSOCIATION: Instytut matematyky AN URSR (Institute of Mathematics, AS UkrSSR)

PRESENTED: by Academician AS UkrSSR, B.V. Gnyedenko

SUBMITTED: November 16, 1960

Card 8/8

MARANOVIK, A.V.

137-58-5-8749

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 4 (USSR)

AUTHORS: Maranovik, A. V., Gyul'akhmedov, V. N.

TITLE: Improving the Quality of Cobalt Concentrate (Povysheniye kachestva kobal'tovogo kontsentrata)

PERIODICAL: Byul. Tsentr. in-t inform. M-va tsvetn. metallurgii SSSR, 1957, Nr 1, p 10

ABSTRACT: In order to improve the quality of concentrate it is suggested that five consecutive purification stages be included in the existing operational procedure. As a result of the introduction of these measures, the specific weight of high-grade production increased to 37.7 percent, while that of low-grade output decreased to 12.8 percent.

A. Sh.

1. Cobalt ores--Processing 2. Cobalt ores--Purification

Card 1/1

S/263/62/000/004/003/009
I004/1204

AUTHOR: Maranowicz, Stanisław

TITLE: Vibrometer

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. Izmeritel'naya tekhnika, no. 4, 1962, 15-16, abstract 32.4.108 P [Strzybnickie Zakłady Konstrukcji i Elementów Zelbetowych] Polish patent, class 42c, 42, no. 43654, February 4, 1961

TEXT: The patent covers a vibrometer used for rapid determination of the amplitude and frequencyof vibration machines. The main part of the vibrometer consists of a frame with a series of springs of various lengths stretched across it. The frame is rigidly mounted in a wooden box. The vibrations of the box walls are easily transferred to the springs. A double slide is fixed on the frame; by displacing the slide towards the resonating spring one may read the frequency of the vibrations on a horizontal scale and their amplitude on a vertical scale. The range of calibration frequencies is selected in accordance with requirements, for example, 2770 to 3900 vibrations per minute at amplitudes between 0 and 2 mm. The springs are so chosen that their length corresponds to a quarter of a wavelength. An amplitude limiter limits displacements of the springs which exceed a certain limit. If the actual vibration frequency lies between the resonant poins of two adjacent springs, both these springs will vibrate. In this case their amplitudes should be read separately and added together.

[Abstracter's note: Complete translation.]

Card 1/1

MARANSKI, Cz.

Polish bibliography on parasitology. Wiadomosci parazyt., Warsz. 2 no.3:179-184 1956.

(PARASITOLOGY,
bibliog. (Pol))

POLAND/Chemical Technology - Chemical Products and Their Application. Pesticides. H.

Abs Jour : Ref Zhur - Khimiya, No 10, 1959, 36140.

Author : Maranski, Cz., Wielopolski, A., Skotnicki, J.

Inst : Institute for Small Industry.

Title : The Struggle Against the Gadfly with the Aid of Preparation PChDS-56.

Orig Pub : Biul. inform. Inst. prexem. drobnego, 1956, 3, No 1-2/8, 1-2.

Abstract : There are submitted the results of experiments in the struggle against gadflies with the aid of preparation PChDS-56, containing n-dichlorobenzene, S compounds occurring in the low-temperature fractions of coal tar (melting point, 140-310°), the K salt of raw thallic acids and the Na salt of dibutylmethyl naphthalenesulphonic

Card 1/2

H-107

MARANSKI, Czeslaw

Recent parasitological publications. Wiadomosci parazyt., Warsz. 4 no.3 252-275 1958
(PARASITOLOGY, bibliog. (Pol))

MARANSKI, Czeslaw

Comparison of effectiveness of various chemical preparations in control of myiasis in cattle. Wiadomosci parazyt., Warsz. 4 no.5-6:485-486; Engl. transl. 486-487 1958.

1. Z Zakladu Parazytologii PAN w Warszawie.
(CATTLE, dis.
myiasis, chem. prev. comparison of various drugs (Pol))
(MYIASIS, prev. & control,
in cattle, comparison of various drugs (Pol))

MARANSKI, Czeslaw

Results of liver fluke in the Warsaw region. Wiadomosci parazyt., 7 no.4/6:934-938 '61.

1. Zaklad Parazytologii PAN. Warszawa.
(LIVER DISEASES veterinary)
(TREMATODE INFECTIONS veterinary)

Warsaw, Medycyna Weterynaryjna, Vol 18, No 2, February 1962.

1. "The Role of Animals in the Problem of Tumors," Prof. Dr. Aleksander ZACHERSKI; pp 65-68.

2. "The Problem of Zoonanosis," Stanislaw KIHOR of the Research Office for Diseases of Domestic Animals (Zakład Chorób Zwierząt Użytkowych) of the Institute for Veterinary Science, (Instytut Weterynarii) in Puławy; Prof. Dr. S. KIHOR; pp 68-71.

3. "Observations and the Types of Fibric Found in the Prepuce of Bulls," K. HOPPE and Z. RYKIENICZ of the Chair of Obstetrics and Pathology of Reproduction (Katedra Położnictwa i Patologii Rozrodu) of the Faculty of Veterinary Science (Wydział Weterynarii) of the SGGW (Szkoła Głowna Gospodarstwa Wiejskiego) at Warsaw (Director: Main School of Rural Economy); pp 71-75 (English summary). Prof. Dr. Hanna HOPPE.

4. "Anaplasmosis in Cattle," Dr. M. J. SAS PODWINSKI; pp 75-79.

5. "Salmonellosis of Cattle in Poland during 1957-1960," Stanisław NEWIERSKI of the Veterinary Hygiene Research Office (Wojewódzki Zakład Higieny Weterynaryjnej) at Nowy Sącz (Director: Dr. S. NEWIERSKI); pp 79-83.

6. "Rabies in Wild Animals in Poland During 1957-1960," Danuta SENKOWA of the Epidemiology Research Office (Zakład Epidemiologii) of the PZH (Państwowy Zakład Higieny, State Institute of Hygiene) at Warsaw (Director: Prof. Dr. J. KOSTRZEWSKI); pp 83-84.

7. "Some Notes on Rhinitis atrophicans in Pigs," Stefan SAMOL of the General Epizootiology Research Office (Zakład Epizootiologii) of the Institute of Veterinary Science (Instytut Weterynaryjny) at Puławy (Director: Prof. Dr. Stanisław KRAUSS); pp 85-87.

8. "Attempt to Differentiate Strains of the Newcastle Disease Virus on the Basis of the Aldehyde Activity," Jerzy NIEMIERSKI; pp 88-91.

9. "Note on the Tuberculin Test in Horses," Feliks M. KOWOLSKI; p 91.

10. "Results of Control of Liver Fluke Disease in the - Wojewódstwo of Warsaw," Czesław MARANSKI; p 92.

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MARANSKI, C.

Polish parasitological bibliography for the year 1960. Wiad. parazyt. 9 no.1:74-91 '63.
(PARASITIC DISEASES) (PARASITES) (BIBLIOGRAPHY)

MARANSKI, Czeslaw

The effect of the control action of cattle grub on the intensity of infection in the following years. Acta parasit Pol 11 no. 19: 265-282 '63.

1. Zaklad Parazytologii, Polska Akademia Nauk, Warszawa.

ZARNOWSKI, Eugeniusz; [illegible], Wiesław; DARSKI, Jerzy; MALCZEWSKI, Andrzej; MARANSKI, Czesław; ZEBROWSKA, Danuta; JANECZEK, Marian.

Studies on the therapy of fascioliasis in cattle. I. Intramuscular injections of CCl_4. Wiad. parazyt. 10 no.2:179-180 '64

Studies on the therapy of fascioliasis in cattle. II. Hexachlorethane (Distovet-Biovet and Aviothane I.C.I.) and 1,4-bistrichloromethylbenzene (Hetol-Hoechst).

1. Zakład Parazytologii i Chorób Inwazyjnych Instytutu Weterynaryjnego w Puławach i Zakład Parazytologii Polskiej Akademii Nauk w Warszawie.

ZAMIOWSKI, Eugeniusz; CHOWANIEC, Wieslaw; MALCZEWSKI, Andrzej; MARANSKI, Czeslaw; ZEBROWSKA, Danuta; JANECZEK, Marian

Studies on the therapy of fascioliasis in cattle. III. Hexachlorophene (Bilevon-Bayer) and 2,2'-dichloro-4,4'-dinitro-1,1'-dioxydiphenol (Bilevon M-Bayer, Bilevon 9015-Bayer). Wiad. parazyt. 10 no.4:483-485 '64

1. Zaklad Parazytologii i Chorob Inwazyjnych Instytutu Weterynaryjnego w Pulawach i Zaklad Parazytologii Polskiej Akademii Nauk, Warszawa.

MARANSKI, Czeslaw

Study of the control of hypodermatosis. Wiad parazyt. 11 no.1: 284-288 '65.

1. Zaklad Parazytologii Polskiej Akademii Nauk, Warszawa.

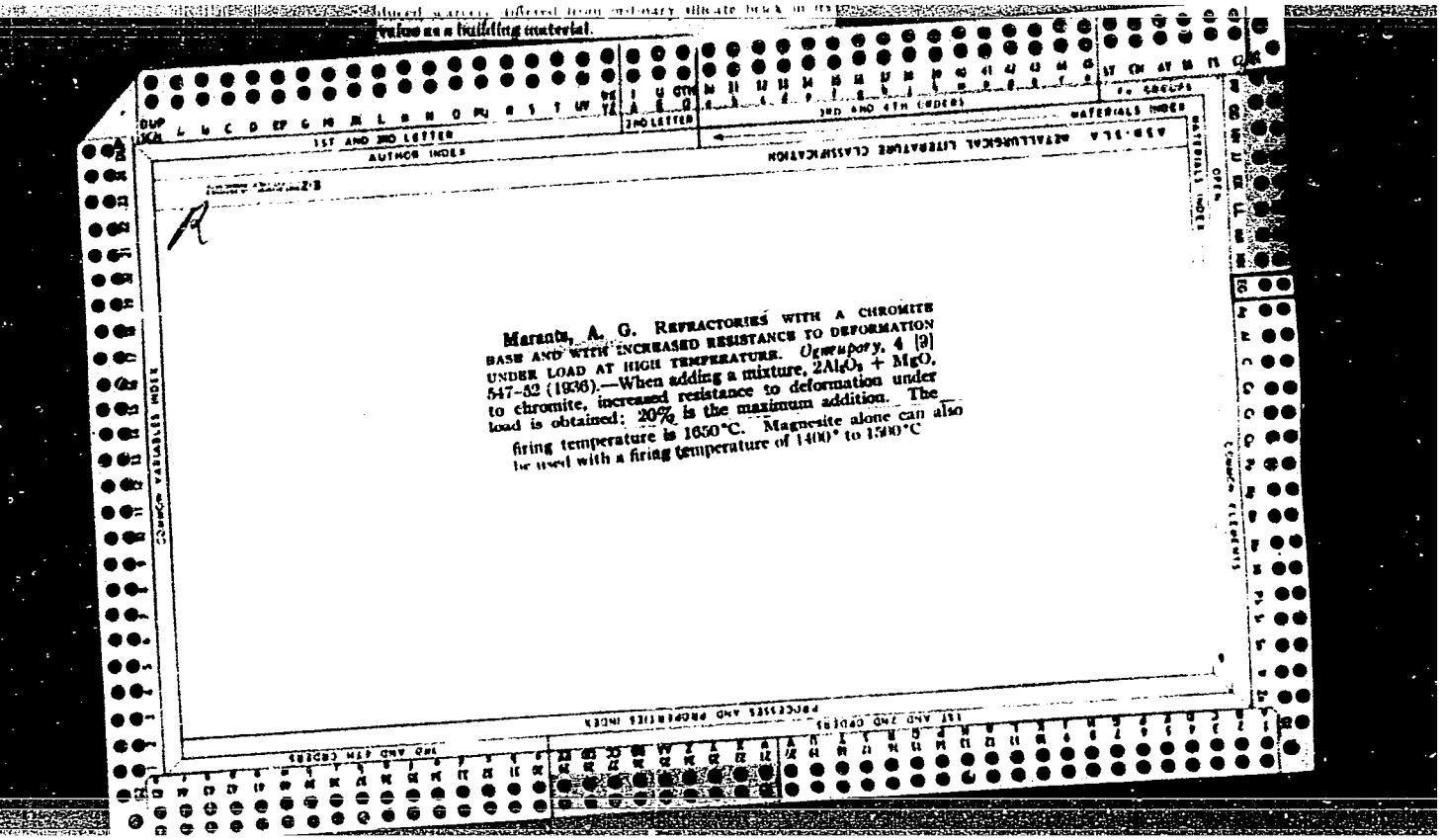
MARANSKI, C.

Polish parasitological bibliography for 1962. Wiad. parazyt. 11 no.3:197-222 '65.

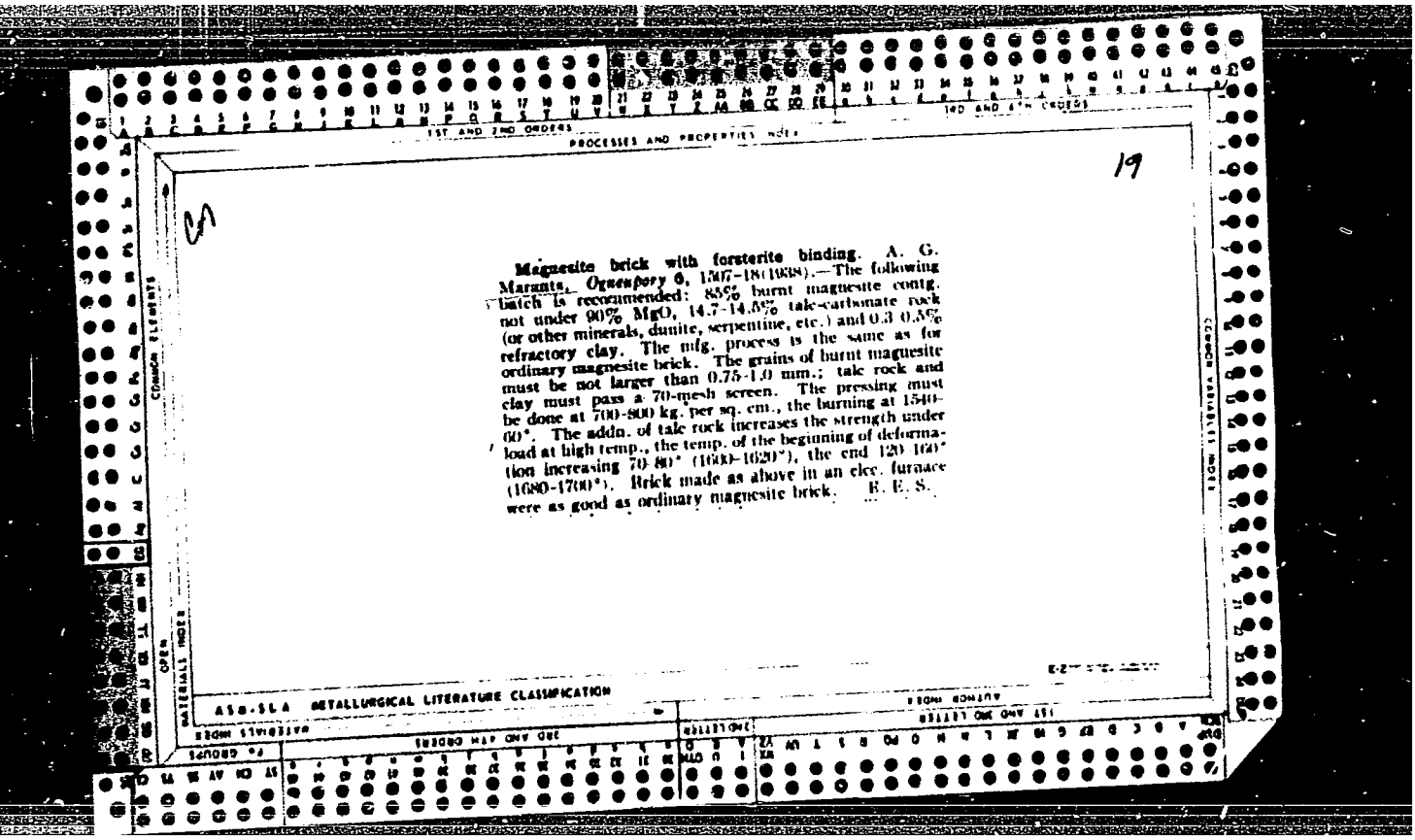
MARANTIDI, G.Ye.; KHVOROSTOVA, K.G.

Central nervous system function in patients with cardiovascular diseases and its changes following treatment with hydrogen sulfide and radon baths. Vop. kur., fizioter. i lech. fiz. kul't. 26 no.3:238-243 My-Je '61. (MIRA 14:7)

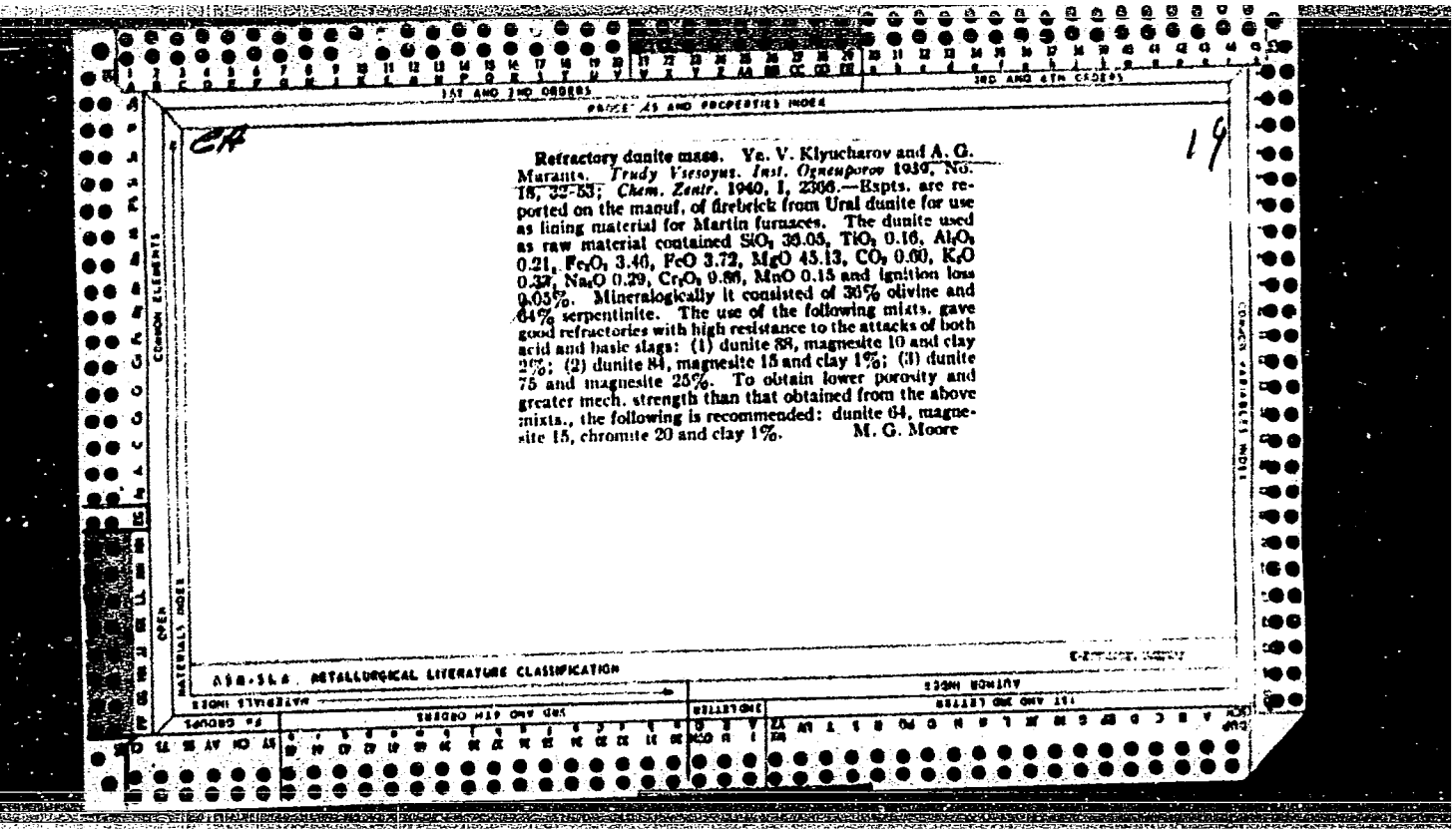
1. Iz otdeleniya funktsional'noy diagnostiki (zav. - doktor meditsinskikh nauk G.Ye.Marantidi) TSentral'nogo instituta kurortologii (dir. - kandidat meditsinskikh nauk G.N.Paspelova).
(NERVOUS SYSTEM) (CARDIOVASCULAR SYSTEM--DISEASES)
(HYDROGEN SULFIDE--THERAPEUTIC USE)
(RADON--THERAPEUTIC USE)



Maranta, A. G. REFRACTORIES WITH A CHROMITE BASE AND WITH INCREASED RESISTANCE TO DEFORMATION UNDER LOAD AT HIGH TEMPERATURE. *Ogneupory*, 4 [9] 547–52 (1936).—When adding a mixture, $2Al_2O_3 + MgO$, to chromite, increased resistance to deformation under load is obtained; 20% is the maximum addition. The firing temperature is 1650°C. Magnesite alone can also be used with a firing temperature of 1400° to 1500°C



Magnesite brick with forsterite binding. A. G. Marants. *Ogneupory* **6**, 1507–18(1938).—The following batch is recommended: 85% burnt magnesite contg. not under 90% MgO, 14.7–14.5% talc-carbonate rock (or other minerals, dunite, serpentine, etc.) and 0.3–0.5% refractory clay. The mfg. process is the same as for ordinary magnesite brick. The grains of burnt magnesite must be not larger than 0.75–1.0 mm.; talc rock and clay must pass a 70-mesh screen. The pressing must be done at 700–800 kg. per sq. cm., the burning at 1540–60°. The addn. of talc rock increases the strength under load at high temp., the temp. of the beginning of deformation increasing 70–80° (1600–1620°), the end 120–160° (1680–1700°). Brick made as above in an elec. furnace were as good as ordinary magnesite brick. E. E. S.



Refractory dunite mass. Ye. V. Klyucharov and A. G. Marants. *Trudy Vsesoyuz. Inst. Ogneuporov* 1939, No. 18, 32-53; *Chem. Zentr.* 1940, I, 2306.—Expts. are reported on the manuf. of firebrick from Ural dunite for use as lining material for Martin furnaces. The dunite used as raw material contained SiO_2 39.05, TiO_2 0.16, Al_2O_3 0.21, Fe_2O_3 3.40, FeO 3.72, MgO 45.13, CO_2 0.60, K_2O 0.37, Na_2O 0.29, Cr_2O_3 0.86, MnO 0.15 and ignition loss 0.05%. Mineralogically it consisted of 36% olivine and 64% serpentinite. The use of the following mixts. gave good refractories with high resistance to the attacks of both acid and basic slags: (1) dunite 88, magnesite 10 and clay 2%; (2) dunite 84, magnesite 15 and clay 1%; (3) dunite 75 and magnesite 25%. To obtain lower porosity and greater mech. strength than that obtained from the above mixts., the following is recommended: dunite 64, magnesite 15, chromite 20 and clay 1%. M. G. Moore

USSR/Engineering - Refractories, Jul 52
Magnesite, Technology

"On Progressive Technology of Magnesite Products,"
A.G. Marants, Cand Tech Sci, Leningrad Inst of Refractories

"Ogneupory" No 7, pp 302-309

Discusses fabrication of magnesite metallurgical powder and ordinary magnesite brick at Magnezit Plant and works out more efficient method. Concludes that progressive technology of magnesite brick must be based on using synthetic magnesite

220T87

powder stable in respect to its chem phase and grain comp. Suggests 2d less efficient but still rational method on basis of fine-grained, 2 to 0 mm, fractions of metallurgical powder from concd coarse-grained magnesite of class one.

220T87

MARANTS, A. G.

MARANTS, A.G.

ZAGZHDA, V.P.; TIKHONOVA, L.A.; SOKOLOV, V.I.; MARANTS, A.G.; RYBNIKOV, V.A.; KAZAKEVICH, S.S.; SARMIN, A.P.; GAVRILOV, A.I.; NOVIKOV, A.N.; NECHEPORENKO, M.A.; KAL'NOVA, Ye.A.; FEDOROV, G.A., redaktor; FEL'DGANDLER, G.G., redaktor; ROZENTSVEYG, Ya.D., redaktor izdatel'stva; MIKHAYLOVA, V.V., tekhnicheskiy redaktor

[Handbook on refractory elements and materials] Spravochnik na ogneupornye izdeliia, materialy i syr'e. Sostavlen po gosudarstvennym standartam i tekhnicheskim usloviiam. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 195 p. (MLRA 10:2)

1. Russia (1923- U.S.S.R.) Ministerstvo chernoy metallurgii. 2. Leningradskiy institut ogneuporov. (for Zagzhda, Tikhonova, Sokolov, Marants, Rybnikov, Kazakevich, Sarmin, Gavrilov, Novikov, Necheporenko, Kal'nova.

(Refractory materials)

MARANTS, A.G.; KAMENCHIK, A.E.

Experimental use of melted and cast-zircon mullite refractories in open-hearth furnace "caissons." Ogneupory 22 no.4:145-152 '57. (MLRA 10:6)

1. Leningradskiy institut ogneuporov.
(Open hearth furnaces) (Zircon) (Mullite)

Marants, A.G.

AUTHORS: Ivanov, Ye. V., Gaodu, A. N., Marants, A. G. 131-2-1/10

TITLE: On the Problem of the Utilization of Caustic Dust for the Production of Sintered Magnesite Powders (K voprosu ispol'zovaniya kausticheskoy pyli dlya proizvodstva magnezitovykh spechennykh poroshkov).

PERIODICAL: Ogneupory, 1958, Nr 2, pp 49-54 (USSR)

ABSTRACT: The investigations of VNIIO have shown, that it is possible to produce powders on the basis of caustic dust with the help of sedimentation. A group of researchers together with Ye. F. Bugayev of the "Magnesite" plant conducted experiments in the laboratory and in the plant for the purpose of silt preparation with a varying content of raw magnesite and of caustic dust. In order to investigate the properties of the dust, samples were taken from different cyclone seperator groups (see figure). The experimental results are given in tables 1 and 2. Magnesite slip from raw magnesium and caustic dust the chemical composition of which is given in table 3 were employed for the laboratory experiments. The properties and precipitation velocities of the slip prepared from 100 % caustic dust are given in table 4. Table 5 contains the slip properties of a mixture of raw magnesite and caustic dust

Card 1/2

and table 6 the chemical composition of the raw magnesite and slip the caustic dust. The modification of the chemical composition of the slip with an addition of caustic dust can be seen from table 7. On the basis of the experiments conducted a pneumatic transport system was constructed for the supply of caustic dust to the mill bunkers. By means of further measures adopted it was possible to produce slip of 100 % caustic dust.
There are 1 figure and 7 tables.

ASSOCIATION: Institute of Refractory Materials, Khar'kov (Khar'kovskiy institut ogneuporov).
Institute of Refractory Materials, Leningrad (Leningradskiy institut ogneuporov).

AVAILABLE: Library of Congress

MARANTS, A.G.; DEREVYANCHENKO, L.D.; VAR'YEND, V.A., tekhn. red.

[Enumeration of standards and specifications for articles of the refractories industry and for raw materials used in their production as of October 1, 1959] Perechen' deistvuiushchikh standartov i tekhnicheskikh uslovii na izdeliia ogneupornoi promyshlennosti i iskhodnye materialy dlia ikh proizvodstva (po sostoianiiu na 1 oktiabria 1959 goda). Sost.A.G.Marants, i L.D.Derevianchenko. Leningrad, 1959. 71 p. (MIRA 16:10)

1. Leningrad. Vsesoyuznyy gosudarstvennyy institut nauchno-issledovatel'skikh i proyektnykh rabot ogneupornoy promyshlennosti.
(Refractory materials—Standards)

MARANTS, A. G.

PHASE I BOOK EXPLOITATION SOV/5865

Zegzhda, V. P., L A. Tikhonova, V. I. Sokolov, A. G. Marants, V. A. Rybnikov [deceased], L. D. Derevyanchenko, A. K. Karklit, E. A. Aksel' rad, and A. P. Sarmin

Spravochnik na ogneupornyye izdeliya, materialy i syr' ye. Sostavlen po gosudarstvennym standartam i tekhnicheskim usloviyam (Handbook of Refractory Products, Materials and Raw Materials. Compiled According to State Standards and Technical Specifications) 2d ed. rev. and enl. Moscow, Metallurgizdat, 1961. 338 p. Errata slip inserted. 12,500 copies printed.

Supervisor: A. G. Marants; Ed.: G. G. Fel' dgandler; Ed. of Publishing House: Ye. I. Maksimov; Tech. Ed.: A. I. Karasev.

PURPOSE: This manual is intended for technical personnel working in ferrous and nonferrous industries and in other branches of industry and construction, for planners, designers, and personnel of technical supply administrations,

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and for specialists in refractory manufacture and application.

COVERAGE: The manual deals with State standards and technical specifications for refractory ware, materials, and stock used in the construction and repair of furnaces used for smelting, heating, calcination, and distillation, and of fire chambers for boilers and dryers. The specifications also cover other thermal units used for processing under high thermal conditions, but do not include all refractory materials since approximately 10% of them have never been standardized. This edition has been enlarged by the inclusion of data on cast refractories and carbonaceous ware, as well as additional data on refractory stock, magnesite ware, forsterite ware, and metallurgical filler powders. The lists included in the manual contain State standards and specifications approved as late as Mar 1960. No personalities are mentioned. There are no references.

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AVAILABLE: Library of Congress (TN677.S67)

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JA/rsm/jk
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MARANTS, A.G.; KAMENCHIK, A.E.

Refractory materials made of magnesite dust obtained by a wet process. Ogneupory 26 no.8:355-360 '61. (MIRA 14:9)

1. Vsesoyuznyy institut ogneuporov.
(Magnesite) (Refractory materials)

MARANTS, A.G.

Expanding the production of electrocast refractories. Ogneupory 29 no.11:499-500 '64. (MIRA 18:1)

1. Vsesoyuznyy institut ogneuporov.

STRELOV, K.K.; BESSONOV, A.F.; LOPATINSKAYA, D.I.; MARANTS, A.G.; DOLGIKH, A.Ye.

Determining the density of refractories. Ogneupory 30 no.6: 1-8 '65. (MIRA 19:1)

1. Vostochnyy institut ogneuporov (for Strelov, Bessonov, Lopatinskaya). 2. Vsesoyuznyy institut ogneuporov (for Marants, Dolgikh).

L 09099-67 EWT(m)/EWP(t)/ETI/EWP(k) JD

ACC NR: AP7002329 SOURCE CODE: UR/0422/66/000/006/0044/0045

Harants, A.G., Dorovyanchenko, L.D., Norkina, A.S.

35

"New Standards - Products for Pouring Steel From the Ladle"

Moscow, Standarty i Kachestvo, No 6, June 66, pp 44-45

Abstract: The All-Union Institute of Refractories has developed and the Committee on Standards has approved State All-Union Standard (GOST) 5500-64 on refractory stopper materials. The new standard has replaced GOST 5500-50 and 4978-49 in th stopper tube section. It covers refractory and highly refractory products for pouring steel from the ladle: stopper tubes, plugs, molds, mold covers and pit bricks. The number of standard dimensions was reduced for stopper tubes from 15 to 8, for molds from 31 to 20, for covers from 3 to 2. For pit brick the number of standard diemnsions increased from 3 to 12, since component brick has been introduced for the most widely used mold types (160 and 210 mm diameter). Large size ladles are to use thicker stopper tubes and 200 mm diameter plugs which will protect the pin from overheating; a plug with a lengthened spherical portion is also called for. For chamotte stopper tubes the content of Al_2O_3 plus TiO_2 is set at 33% for all enterprises. For chamotte plugs, special, this norm is set at no less than 39%, which corresponds to the requirements for heat resistance. The temperature at whcih chamotte semi-dry produced plugs may start to deform under load according to the new standard.

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is 1320° C for general purpose and 1350° C for special purpose plugs. This will provide for normal operating conditions of the plug device. The compressive strength for chamotte pit brick is increased from 100 to 125 kg/cm^2. The expansion of the assortment of plug products, improvement of their jointing, wide introduction of the semi-dry method of production of aluminosilicate products and stiffening of requirements as to certain physical and chemical indices allow an improvement of the quality of plug supplies and a considerable increase in the reliability of the plug structure. /JPRS: 37,480/

ORG: none

TOPIC TAGS: refractory, aluminum oxide

SUB CODE: 11 / SUBM DATE: none

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S/148/61/000/006/003/013
E193/E483

AUTHORS: Tarnovskiy, I.Ya., Levanov, A.N., Skornyakov, V.B. Marants, B.D.

TITLE: Investigation of contact friction forces during reduction (by forging)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, 1961, No.6, pp.53-59

ABST: When operations of the squeezing group are used to form a metal component, the working pressure required to effect the plastic deformation, the character of the metal flow and the distribution of stresses and strains depend upon the frictional forces in the area of contact between the tool and the metal being worked. Experimental determination of these forces has been the subject of many investigations in which, however, methods and equipment both complex and inaccurate have been used. In the present paper, its authors describe a simple equipment with the aid of which accurate data on the contact friction forces can be obtained, irrespective of whether static or dynamic loads are used to deform the metal. The equipment (Fig.1a) comprises a measuring block (2), split in the centre and held together by a rod (4) incorporating wire strain

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gauges. The measuring block is placed horizontally between the upper (3) and lower (1) plates of a sub-press assembly, so that two test pieces (shown in the diagram by cross-hatching), placed on either side of the measuring block, can be simultaneously deformed. The test pieces must be placed precisely in line and, in the case of cylindrical specimens, a jig (shown in Fig.1b) is used for this purpose. In both the upper and lower heads pins (6 and 7), sliding freely in their bushes, are inserted. One end of each pin is in contact with the test piece, the other presses against a measuring rod (5 and 8), also equipped with wire strain gauges. The position of the measuring block can be changed with the aid of an adjusting pin (9). When pressure is applied to the sub-press, assembled as shown in Fig.1a, the normal forces in the area of contact between the measuring block and the two test pieces balance each other. The sum of the two friction forces is transmitted onto the measuring rod (4). Consequently, the rod is under the action of a force which is twice the contact friction force, acting in a given part of the contact area whose magnitude depends upon the position of the test piece in relation to the plane of contact of two halves of the measuring block. The pressure exerted on the

test pieces is transmitted by the pins (6 and 7) onto the measuring rods. Pressure and friction forces are recorded with the aid of an oscillograph. This method can be used for measuring the contact friction forces both during flat deformation and during compression of cylindrical specimens deformed at various rates of strain. By varying the distance S between the centres of the test pieces and the parting plane of the measuring block, the integrated contact friction force can be determined as a function of S and tangential stresses at any point of the contact area can be calculated. In the case of flat, rectangular test pieces, the calculation consists of differentiation of the experimentally determined relationship between the integrated friction force and S. The treatment becomes more complex for a cylindrical test piece, axially compressed. In this case, the relationship between the tangential stresses and the experimentally determined equivalent force F(s) acting on the segment determined by the distance S (Fig.2) is given by

$$F(s) = 2\int_{r_K}^{R}\int_{\varphi_o}^{\frac{\pi}{2}} \tau(r) r \sin\varphi \, dr \, d\varphi \qquad (1)$$

where r and φ are the polar coordinates of points on the contact area, $\tau(r)$ is the sought function of the distribution of the tangential stresses along the radius of the contact area and r_K is the current value of the radius determining the boundary of a given segment along the cord. A method of solving this equation is given and applied to experiments in which the contact friction forces were measured during axial compression of cylindrical lead specimens of 36 mm diameter and 36, 12, 6 and 3 mm high. Thirty tests were carried out for each d_o/h_o ratio, where d_o and h_o denote the diameter and height of the specimens, respectively. The specimens were compressed to approximately 12% reduction in thickness at a strain rate of 6 mm/min. The surface finish of the measuring instrument was ∇_8. The results are reproduced graphically. Those obtained for specimens with $d_o/h_o = 1$ are shown in Fig.4, where F (kg, left-hand scale, curve 1), τ (kg/mm^2, right-hand scale, curve 2) and pressure p (kg/mm^2, right-hand scale, curve 3) are plotted against S (mm). The results obtained for specimens with $d_o/h_o = 12$ are shown in the same manner in Fig.7. The results of the present

investigation confirmed the earlier views (Ref.9: I.Ya.Tarnovskiy, A.A.Pozdeyev, O.A.Ganago. "Deformation and forces in pressure forming of metals", Mashgiz, 1959) on the relationship between the friction forces and the geometry of the deformed specimens and on the distribution of these forces in the contact area. They also confirmed the fact (Ref.10: A.I.Tselikov, Stal', 1958, No.5) that the contact friction forces increase as the d_o/h_o of the specimen increases. There are 7 figures and 10 Soviet references.

ASSOCIATION: Ural'skiy politekhnicheskiy institut
(Ural Polytechnical Institute)

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KONDRAT'YEV, A.N., inzh.; MARANTS, G.A., inzh.

Assembling Ferris wheels in Moscow parks. Mov. tekh. i pered. op. v stroi. 20 no.4:16-21 Ap '58. (MIRA 11:3)
(Moscow--Amusement parks)

MARANTS, G Ya.

MARANTS, G.Ya.

Pathomorphology of goiters removed surgically during thyrotoxicosis.
Medych.zhur. 21 no.6:99-105 '51. (MIRA 11:1)

1. Z viddilu patomorfologii (zav. viddilom - diysniy chlen AN URSR O.I.Smirnova-Zamkova) Ukrains'kogo institutu klinichnoi meditsini (direktor - akad. M.D.Strazhesko)
(GOITER)

MARANTS, M.S.

Plotting mutually enveloping profiles. Sbor.st.Ural.politekh. inst. no.65:47-58 '58. (MIRA 12:4)
(Curves in engineering)

L 42991-66 EWT(1)/EWT(m)/EWP(j)/T SOTR IM/GD

ACC NR: AP6012175 (N) SOURCE CODE: UR/0413/66/000/007/0108/0108

INVENTOR: Marantsev, A. M.; Nikol' skiy, P. N.

ORG: none

TITLE: Lifesaving device. Class 65, No. 180494

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, 108

TOPIC TAGS: life raft, caprone net, float, floating anchor

ABSTRACT: An Author Certificate has been issued for a lifesaving device consisting of a towing cable and a caprone net with floats and a floating anchor. To improve the reliability of rescue work, the device is equipped with rafts mounted between the caprone net and the floating anchor, and the floats are connected to the towing cable by hooks (see Fig. 1). Orig. art. has: 1 figure. [Translation] [NT]

Card 1/2 UDC: 627.957.2

L 42981-66
ACC NR: AP6012175

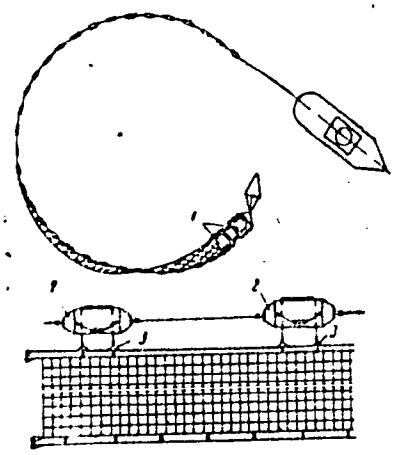

Fig. 1. Rescue device. 1—Rafts; 2—floats; 3—hooks.

SUB CODE: 13/ SUBM DATE: 12Nov64/

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